WHAT IS CLAIMED IS:

1. A photomask comprising:

a substrate;

a translucent film selectively formed on the substrate; and

a shading film selectively formed on the translucent film, wherein

when the substrate, the translucent film and the shading film have Young's moduli (MPa) E_0 E_1 and E_2, and film thickness (m) d_0, d_1 and d_2 respectively, internal stresses (MPa) of the translucent film and the shading film at room temperature are s_1 and s_2 respectively, a covering rate by the translucent film defined by an area in which the shading film is not formed is expressed as h, and coefficients are expressed as $k_1 = 1.3 \times 10^{-8}$, $k_2 = -9.5 \times 10^{-2}$, $k_3 = 6.0 \times 10^{-7}$, and $k_4 = -5.2 \times 10^{-2}$ respectively, the substrate, the translucent film and the shading film satisfy a condition given by the following expression:

$$\left| \frac{1}{E_0 \cdot d_0} \cdot \left\{ h \cdot \left(k_1 \cdot \frac{S_1}{E_1 \cdot d_1} + k_2 \right) + \left(k_3 \cdot \frac{S_2}{E_2 \cdot d_2} + k_4 \right) \right\} \right| \leqq 1.4 \times 10^{-4} (m^{-1})$$

2. A photomask according to claim 1, wherein the internal stress of the shading film at room temperature is in the range of 500 MPa to 5 GPa.

3. A photomask according to claim 1, wherein the

substrate, the translucent film and the shading film satisfy a condition given by the following expression:

$$\left|\frac{1}{E_0 \cdot d_0} \cdot \left\{h \cdot \left(k_1 \cdot \frac{S_1}{E_1 \cdot d_1} + k_2\right) + \left(k_3 \cdot \frac{S_2}{E_2 \cdot d_2} + k_4\right)\right\}\right| \leqq 0.87 \times 10^{-4}(m^{-1})$$

4. A photomask according to claim 3, wherein the internal stress of the shading film at room temperature is in the range of 1 GPa to 4.5 GPa.

5. A photomask according to claim 1, wherein the covering rate h is $100\% > h \geqq 30\%$.

6. A photomask according to claim 1, wherein the substrate, the translucent film and the shading film are made of quartz, MoSiON and Cr, respectively.

7. A photomask according to claim 1, wherein a first phase of light that passes through a first area in which the translucent film and the shading film are not formed differs from a second phase of light that passes through a second area in which the translucent film is formed.

8. A method of manufacturing a photomask comprising:

forming a translucent film and a shading film sequentially onto a surface of a substrate;

measuring an internal stress in each of the translucent film and the shading film;

determining whether or not a following expression is satisfied when the substrate, the translucent film

and the shading film have Young's moduli (MPa) E_0 E_1 and E_2, and film thickness (m) d_0, d_1 and d_2 respectively, internal stresses (MPa) of the translucent film and the shading film at room temperature are s_1 and s_2 respectively, a virtual covering rate by the translucent film after mask pattern formation defined by an area in which the shading film is not formed is expressed as h, coefficients are expressed as $k_1 = 1.3 \times 10^{-8}$, $k_2 = -9.5 \times 10^{-2}$, $k_3 = 6.0 \times 10^{-7}$, and $k_4 = -5.2 \times 10^{-2}$ respectively, and a predicted warping amount for a desired photomask after the mask pattern formation is defined as A (m^{-1}); and

$$\left| \frac{1}{E_0 \cdot d_0} \cdot \left\{ h \cdot \left(k_1 \cdot \frac{S_1}{E_1 \cdot d_1} + k_2 \right) + \left(k_3 \cdot \frac{S_2}{E_2 \cdot d_2} + k_4 \right) \right\} \right| \leqq A\,(m^{-1})$$

removing the translucent film and the shading film selectively to be the covering rate h that satisfy the expression based on the determination result.

9. A method of manufacturing a photomask according to claim 8, wherein the predicted warping amount A is 1.4×10^{-4} (m^{-1}).

10. A method of manufacturing a photomask according to claim 9, wherein the internal stress of the shading film at room temperature is in the range of 500 MPa to 5 GPa.

11. A method of manufacturing a photomask

according to claim 8, wherein the predicted warping amount A is $0.87 \times 10^{-4}(m^{-1})$.

12. A method of manufacturing a photomask according to claim 11, wherein the internal stress of the shading film at room temperature is in the range of 1 GPa to 4.5 GPa.

13. A method of manufacturing a photomask according to claim 8, wherein the virtual covering rate h is $100\% > h \geqq 30\%$.

14. A method of manufacturing a photomask according to claim 8, wherein a first phase of light that passes through a first area in which the translucent film and the shading film are not formed differs from a second phase of light that passes through a second area in which the translucent film is formed.

15. A method of manufacturing an electronic product comprising:

forming a photoresist on a substrate to be processed;

passing light through a photomask having a mask pattern that has a substrate, a translucent film selectively formed on the substrate and a shading film selectively formed on the translucent film to transfer the mask pattern onto the photoresist; wherein when the substrate, the translucent film and the shading film have Young's moduli (MPa) E_0 E_1 and E_2, and film

thickness (m) d_0, d_1 and d_2 respectively, internal stresses (MPa) of the translucent film and the shading film at room temperature are s_1 and s_2 respectively, a covering rate by the translucent film defined by an area in which the shading film is not formed is expressed as h, and coefficients are expressed as $k_1 = 1.3 \times 10^{-8}$, $k_2 = -9.5 \times 10^{-2}$, $k_3 = 6.0 \times 10^{-7}$, and $k_4 = -5.2 \times 10^{-2}$ respectively, the substrate, the translucent film and the shading film satisfy a condition given by the following expression:

$$\left| \frac{1}{E_0 \cdot d_0} \cdot \left\{ h \cdot \left(k_1 \cdot \frac{S_1}{E_1 \cdot d_1} + k_2 \right) + \left(k_3 \cdot \frac{S_2}{E_2 \cdot d_2} + k_4 \right) \right\} \right| \leqq 1.4 \times 10^{-4} (m^{-1})$$

developing the photoresist; and

selectively processing the substrate to be processed using the photoresist as a mask.

16. A method of manufacturing an electronic product according to claim 15, wherein the internal stress of the shading film at room temperature is in the range of 500 MPa to 5 GPa.

17. A method of manufacturing an electronic product according to claim 15, wherein the substrate, the translucent film and the shading film satisfy a condition given by the following expression:

$$\left| \frac{1}{E_0 \cdot d_0} \cdot \left\{ h \cdot \left(k_1 \cdot \frac{S_1}{E_1 \cdot d_1} + k_2 \right) + \left(k_3 \cdot \frac{S_2}{E_2 \cdot d_2} + k_4 \right) \right\} \right| \leqq 0.87 \times 10^{-4} (m^{-1})$$

18. A method of manufacturing an electronic product according to claim 17, wherein the internal stress of the shading film at room temperature is in the range of 1 GPa to 4.5 GPa.

19. A method of manufacturing an electronic product according to claim 15, wherein the covering rate h is $100\% > h \geqq 30\%$.

20. A method of manufacturing an electronic product according to claim 15, wherein a first phase of light that passes through a first area in which the translucent film and the shading film are not formed differs from a second phase of light that passes through a second area in which the translucent film is formed.